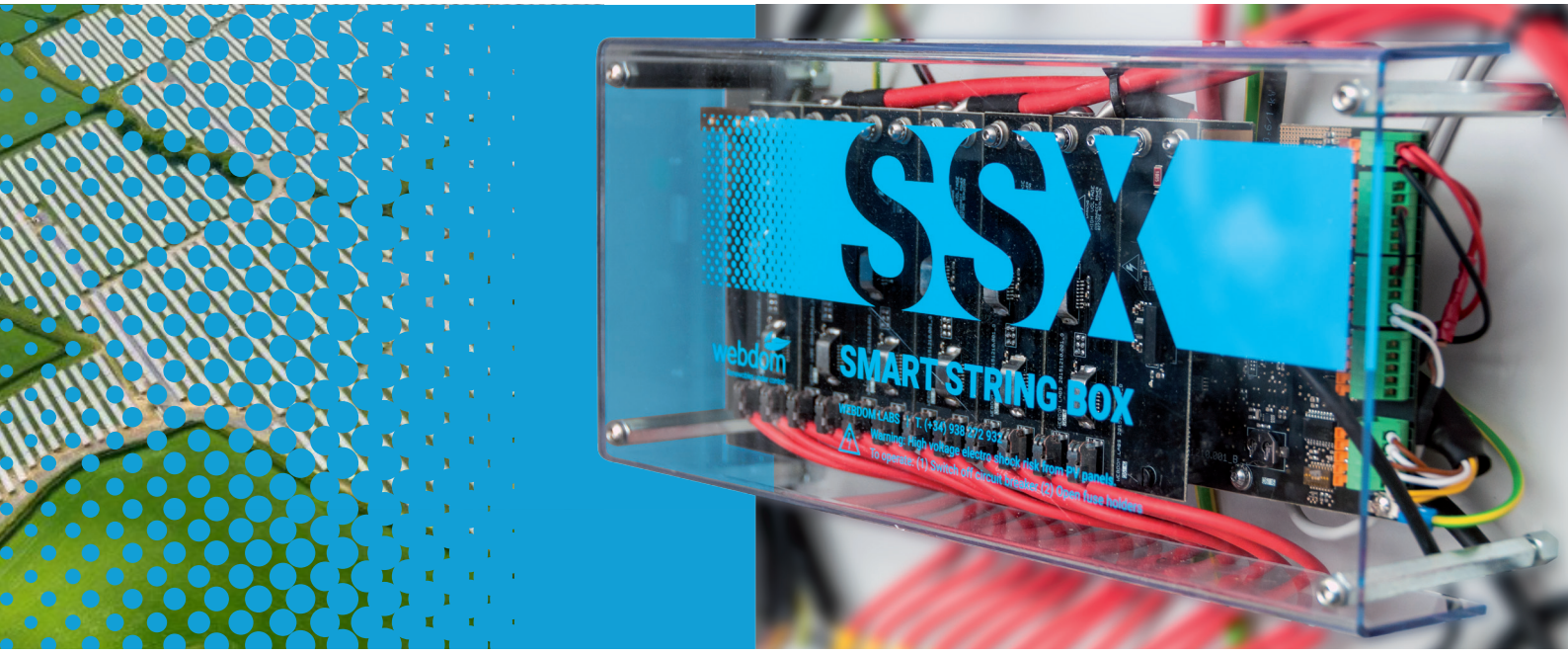
webdom
Renewables under control

www.webdom.es



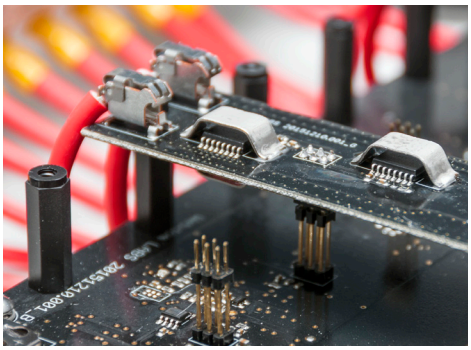

# SSX Smart String Box

WEBDOM LABS PRODUCTS

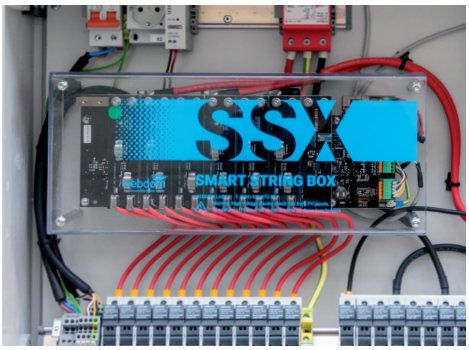
**Hall effect[1] sensors to measure DC up to 16 independent channels in a modular fashion, with operating currents up to 40A. The system also allows to measure voltage and ambient temperature of each module. The main application of this product are Monitored Combiner Box on PV plants.**

The SSX Smart String Box is integrated into PV string boxes and allows knowing the main parameters and detect possible failures in the PV modules. The monitored information facilitates the operating and maintaining tasks of the park, for a better performance and higher output of the solar park.

- **Modular Design**
- **Hall Effect**
- **1 to 16 Strings**
- **Temperature Sensor**
- **Easy to Replace**



The current and voltage boards can be exchanged individually through two easy manipulating screws, without removing the main board. This design streamlines spare tasks and minimizes the out of service time.




SSX Detail. String box on a phototvoltaic plant.

Verification of operating conditions in environments with extreme temperatures and high relative humidities, typical in this kind of installations.

# SSX Smart String Box

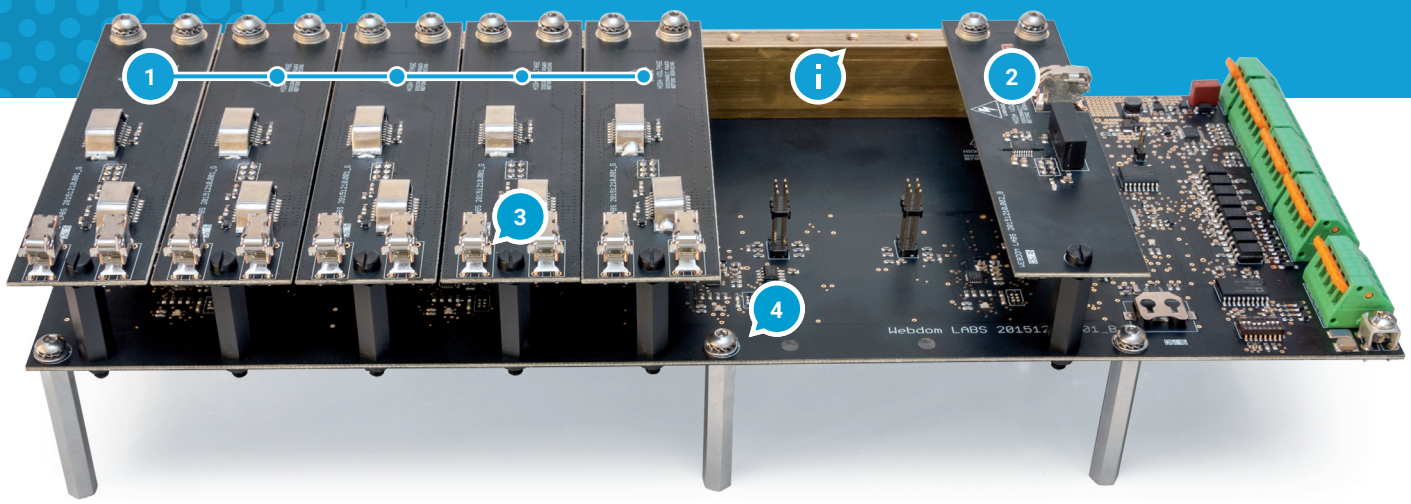
WEBDOM LABS PRODUCTS

## Modular Design

**Webdom SSX is composed of a main board and up to 9 easy expandable sensor boards (current and voltage).**

Main Board Includes digital/analog inputs, datalogging capabilities and Modbus-RTU communication ports.

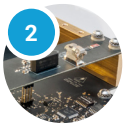
- 5x LED status
- 2x PT100/1000
- 1x 4-20mA
- 1x 0-10V
- 4x Digital inputs
- 4x Digital outputs
- Communication port Modbus-RTU, RS485 to 115,2kbps, input/output terminals (A,B,GND, Shield)
- Isolated RS485 driver with earth connection.
- Datalogging memory (up to 6 month of data)
- 10-30VDC Power Supply
- Consumtion 100mA@24VDC (3W)
- Remote uploading Firmware
- Opcional Radio Module @868MHz




**Easy to Replace**
Quick exchangeable junction with two screws between the individual boards and main board.

**Current sensor board**
2 channels up to 40A each. Includes an on board temperature sensor.

**Sunclix String Connectors**
Voltage/Current cables are easily clipped with SUNCLIX spring contact connectors.

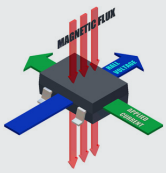


**Voltage sensor board**
DC voltage measure up to 1000VDC.

**Fixing Holes**
Spacers fix the board with the mounting plate inside the cabinet.

## TECHNICAL SPECS

| | |
|---|---|
| **Product code** | SSX001 |
| **Output bus bar** | Brass, 25x10mm, 3 holes threaded M6 |
| **Terminals** | Cross section 1mm2 (with ferrule), 1.5mm2 (without ferrule) |
| **Dielectric Strength Voltage** | 4.8kVrms |
| **Isolation Working Voltage** | 1550 Vpk |
| **Primary conductor resistance** | 0.85 mΩ |
| **Working temperature** | -40ºC to 125ºC |
| **Environment protection** | Tropicalized |
| **Enclosure protection** | Policarbonate up to 115ºC |
| **Fixing holes** | 6xM4, 4xM6 |
| **Relative humidity (%)** | 85% without condensation |
| **Dimensions, Weight** | 400x175 x100 mm, 1.5 kg |
| **Certifications** | CE (IEC 61000-6-3:2007, IEC61000-6-2:2005, UEC61439-1:2011). UL 1741 (optional) |




*(1) The Hall effect is named after Edwin Hall, who in 1879 discovered that a voltage potential develops across a current-carrying conductive plate when a magnetic field passes through the plate in a direction perpendicular to the plane of the plate, as illustrated in the lower panel of figure 1.*